

Developing Poverty Thresholds



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Key in Development



- Determine threshold
 - Calculate resources
- ❖ Goal: Consistently measure thresholds and resources

National Academy of Sciences Recommendations



- 2.1-2.4 A poverty threshold with which to initiate a new series of official U.S. poverty statistics should be derived from Consumer Expenditure Survey [CE] data for a reference family of four persons (two adults and two children).

- Basic bundle
- Percentage of median expenditures
- Multiplier for other needs
- Updating
- Real growth in consumption

- 3.1 Adjustments

The NAS recommended a Procedure.

This paper...

builds on NAS Workshop 2004



- Threshold
 - Concepts and measures
 - Definitions
 - Adjustments
- Data
- Results
 - Time series: 1993-2003
 - Relationship to other series
- Conclusions

Concept Underlying Threshold?



- Input (e.g., food)
- Costs of inputs (i.e., dollars)

Costs Measures Used to Define Thresholds (Basic Needs)



- Spending

- Official poverty threshold
- NAS basically

- Consumption

- What people think about
- For housing in particular, spending does not equal consumption (e.g., subsidized, own)
 - Treat shelter consumption needs of owners and renters consistently – services valued as rent

Costs of inputs

Thresholds Defined in Terms of...

Food, Clothing, Shelter, Utilities, Medicare Care FCSUM


■ Spending

- CE-publication expenditures (NAS and Census): [FCSUM-CE](#)
- Out-of-pocket (OOP) expenditures: [FCSUM-OOP](#)

■ Spending and Consumption


- Expenditures adjusted for select consumption/needs (e.g., shelter): [FCSUM-R](#)

FCSUM-CE (Publication Definition) Threshold




- Out-of-pocket spending on
 - Food (includes Food Stamps value)
 - Clothing
 - Utilities (includes telephone)
 - Medical care
 - For renters, shelter expenditures
- For homeowners, non-vacation shelter expenditures that include
 - Mortgage interest payments (no principal repayments)
 - Prepayment penalties
 - Property taxes
 - Maintenance, repairs, insurance and other related expenditures

FCSUM-OOP (Out-of-Pocket Spending) Threshold



- Same as for “CE” expenditures with the addition of ...
 - Repayments of mortgage principal for homeowners

FCSUM-R (Shelter Consumption) Threshold



- Out-of-pocket spending on
 - | Food
 - | Clothing
 - | Utilities (includes telephone)
 - | Medical care
- Food as pay
- Rent as pay
- Rent of renters
- Rental equivalence of owners
- Adjustment for the medically uninsured using CE data

Caution....



- For a consumption based threshold, would also need
 - Rent controlled or government subsidized housing
 - School breakfast, school lunch, WIC, energy assistance
 - Medical consumption not financed out-of-pocket
 - Goods and services received as gifts ("net" value of gifts)
- ***And*** values would be added to resources for consistency

Computing the Thresholds



- Use three years of quarterly CE data (update to most recent year)
- Determine median expenditures for bundle for reference “family” (2 adults with 2 children)
- Apply three-parameter equivalence scale to food, clothing, shelter, and utilities part and medical spending equivalence scales to medical part
- Update over time using change in median expenditures of bundle

Equations for Thresholds

$$(1 - s_{\text{medical}}) \frac{(1.15 * P_L * M) + (1.25 * P_H * M)}{2} +$$

$$(s_{\text{medical}}) \frac{(P_L * M) + (P_H * M)}{2}$$

➤ Used the midpoints of the percentages and multipliers

Three-parameter Equivalence Scale Applied to $(1 - S_{\text{medical}})$ Part

- **one and two adults**

$$[\text{adults}]^{0.7}$$

- **single parents**

$$[\text{adults} + 0.8 * 1\text{st child} + (0.5 * \text{children} - 1)]^{0.7}$$

- **all other families**

$$[\text{adults} + 0.5 * \text{children}]^{0.7}$$

Medical Expenditure Equivalence Scale



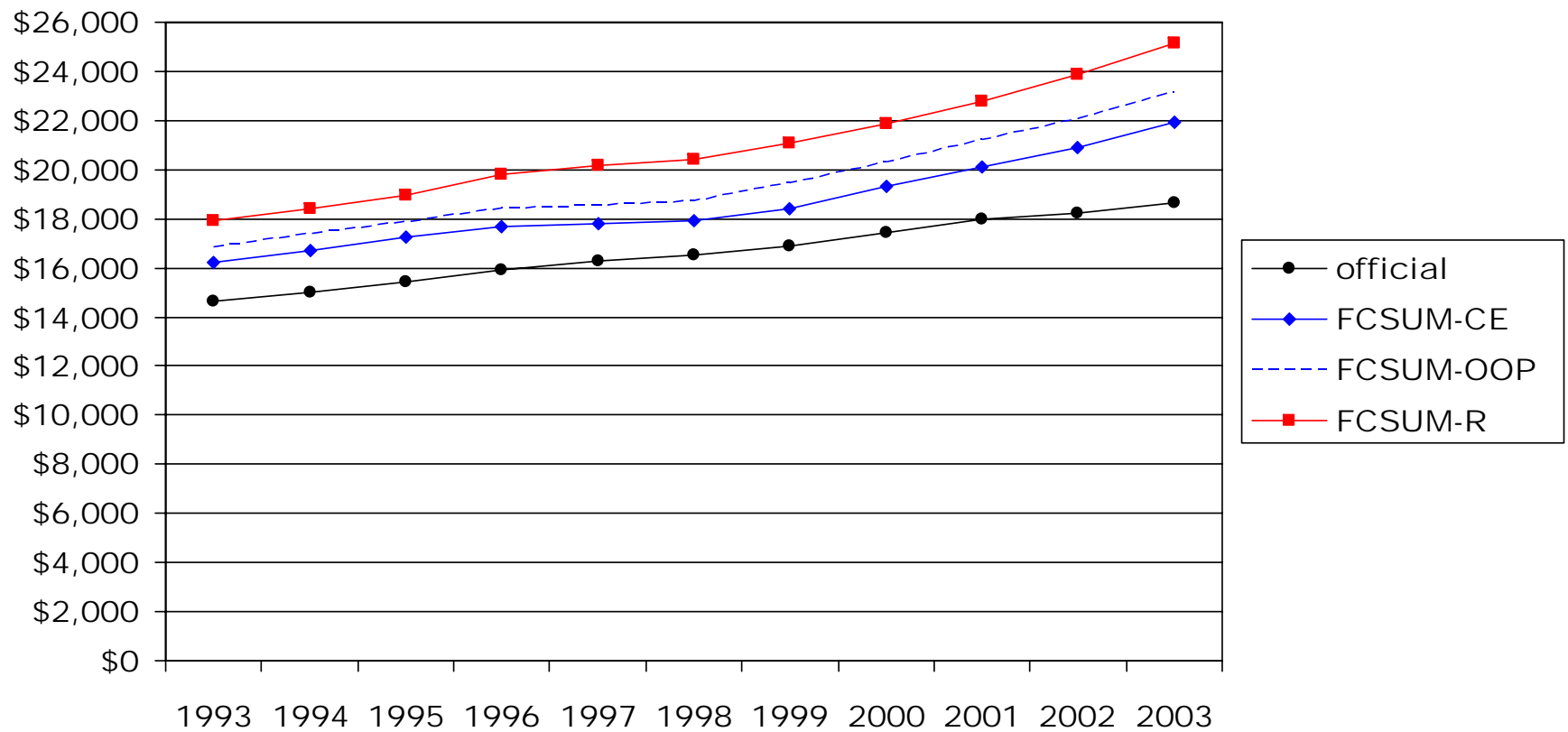
- Number of family members
- Ages of family members
 - < 65 years of age
 - ≥ 65 years of age
- Health insurance status of family members
 - No insurance
 - One private policy
 - One person covered by public insurance and no private coverage

Data

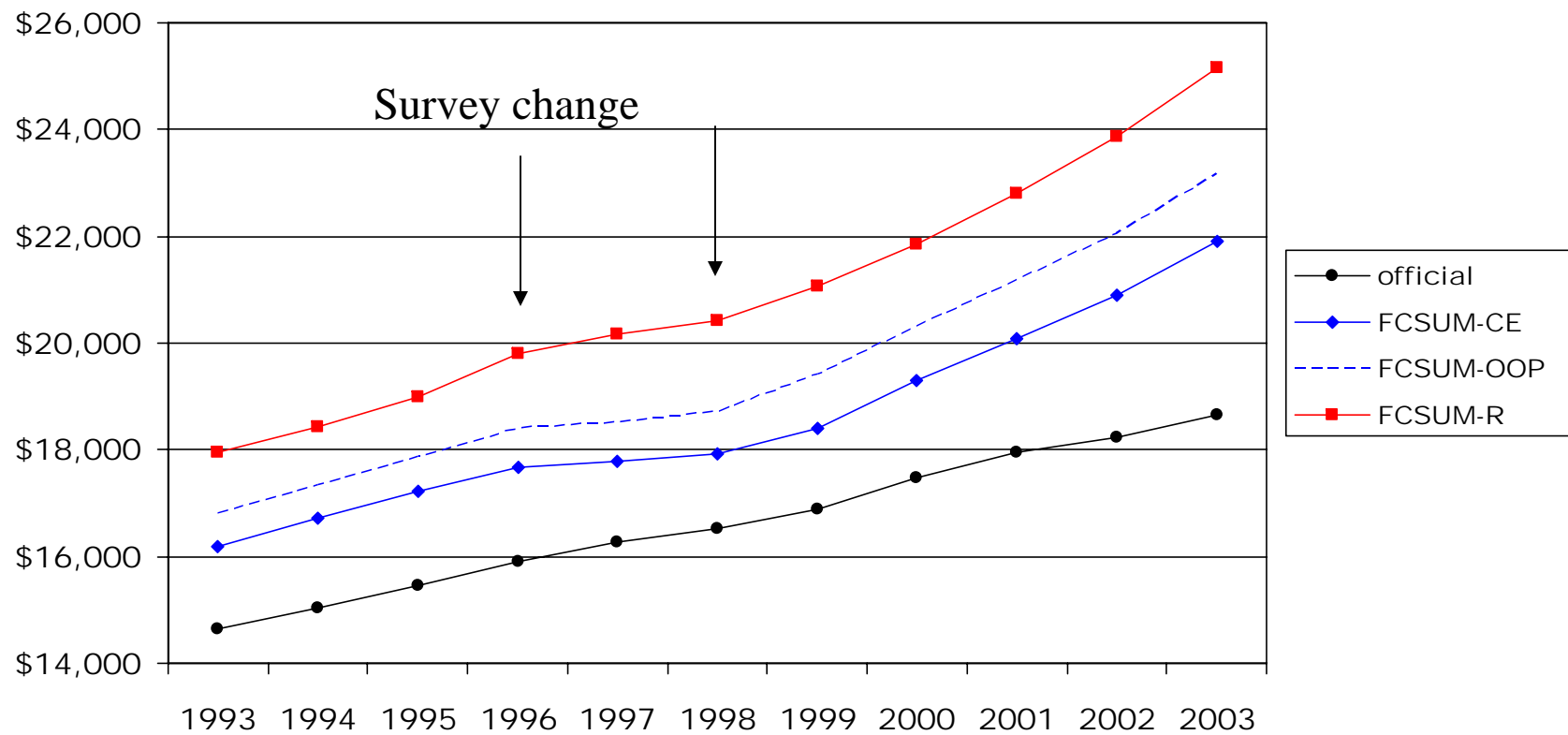


- U.S. Consumer Expenditure Interview Survey
- Each threshold, 3 years of data
 - 1993: 1990 Q2 – 1993 Q1
 - 2003: 2000 Q2 - 2003 Q1
- Assumed quarters are independent

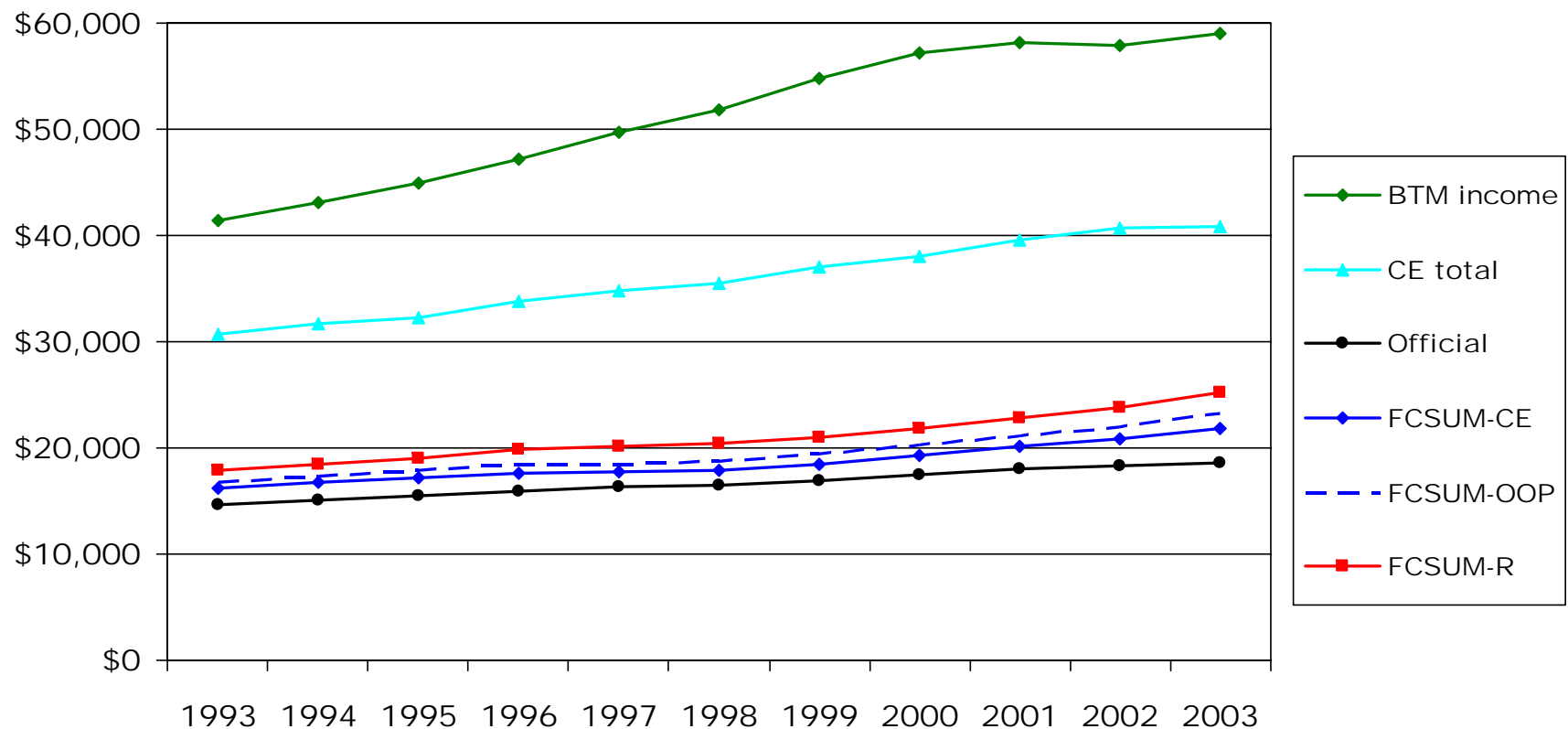
Experimental Thresholds



Experimental Thresholds

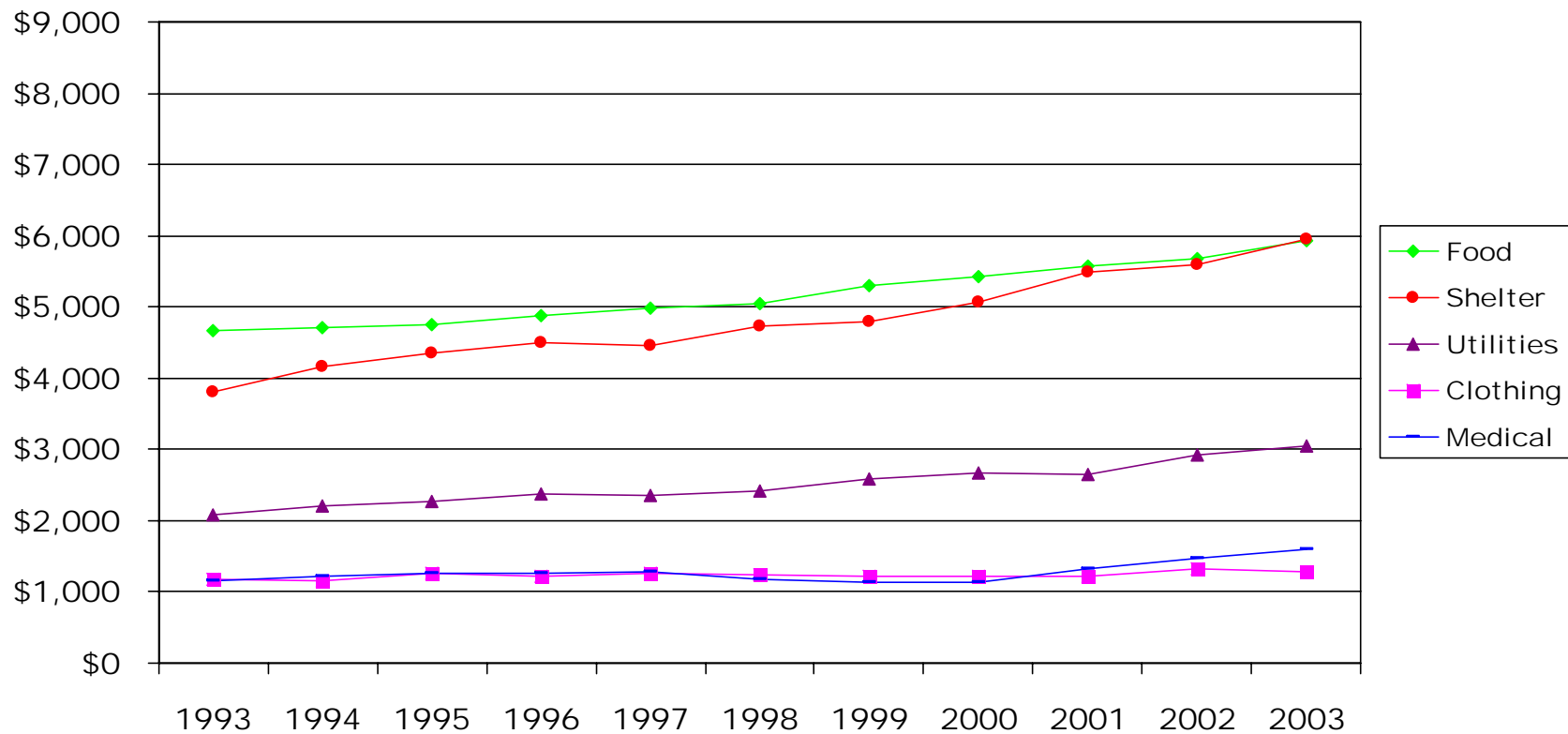


Average Annual CPS Household Income, CE Expenditures, and Thresholds



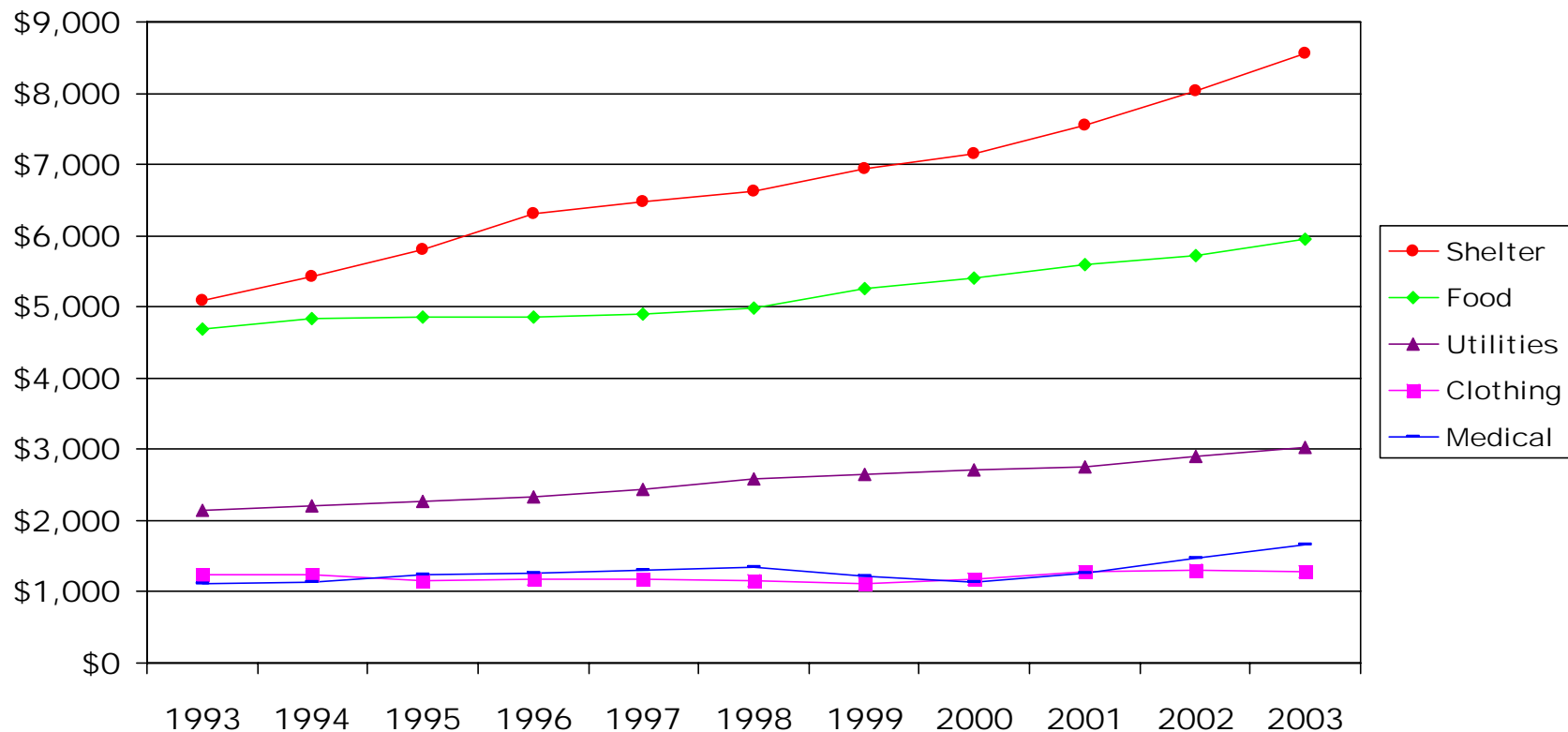
Sources: CPS and CE websites, author's calculations

Reference Family Annualized Spending in the 30th-35th Percentile for FCSUM-CE



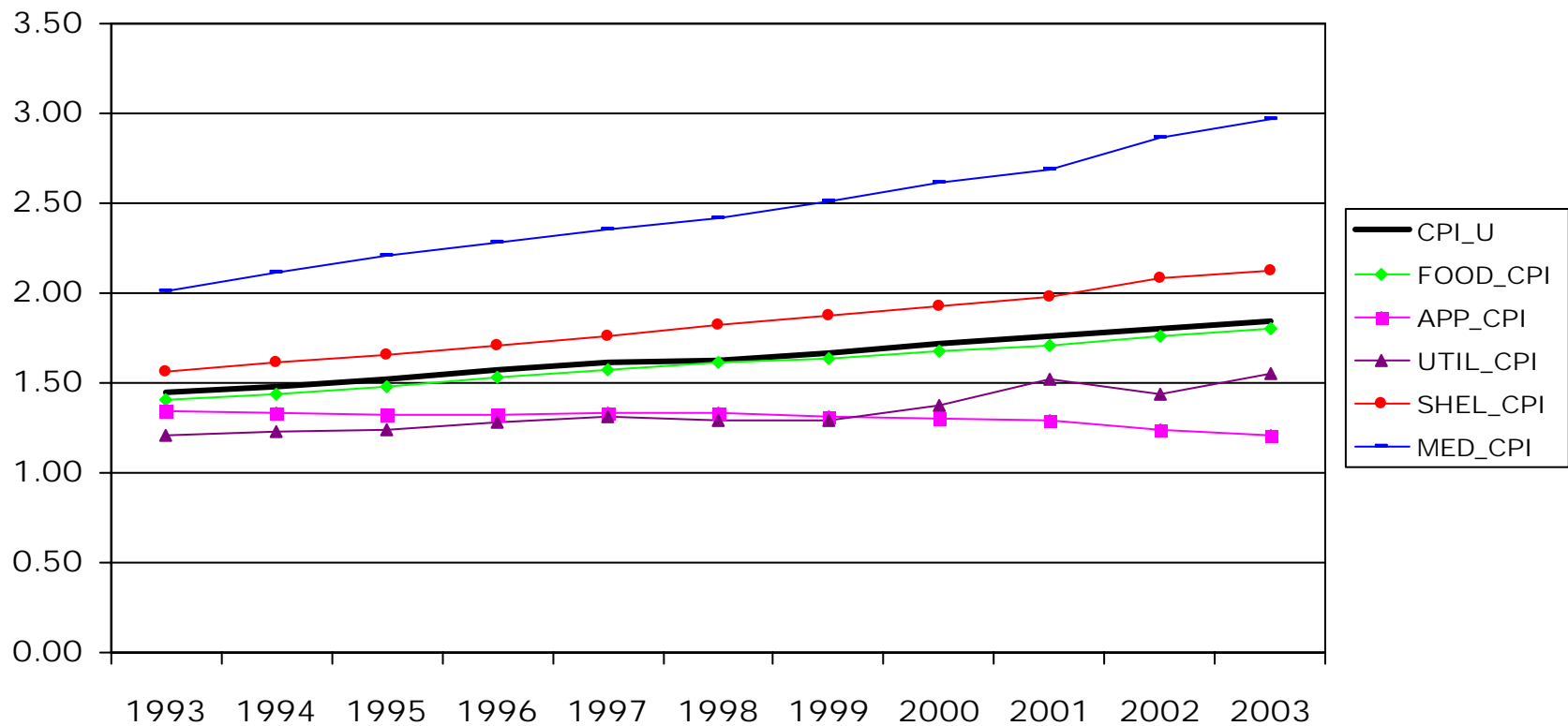
CE publication expenditures

Reference Family Annualized Spending/Owner Consumption in the 30th-35th Percentile for FCSUM-R



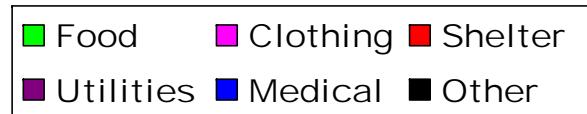
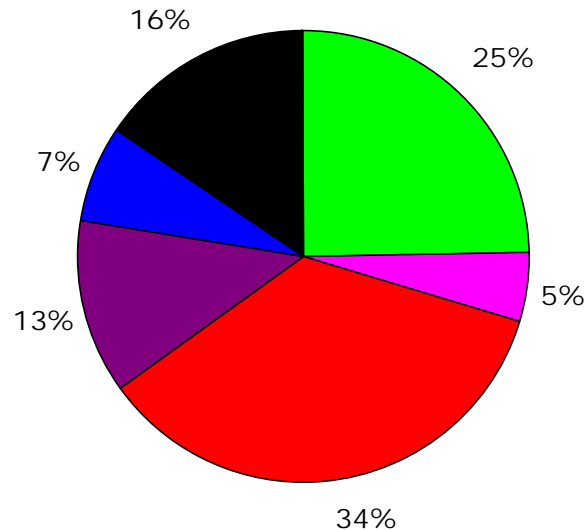
CE publication expenditures adjusted with shelter consumption

CPI-U for All and for Selected Expenditure Categories

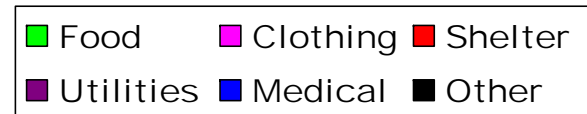
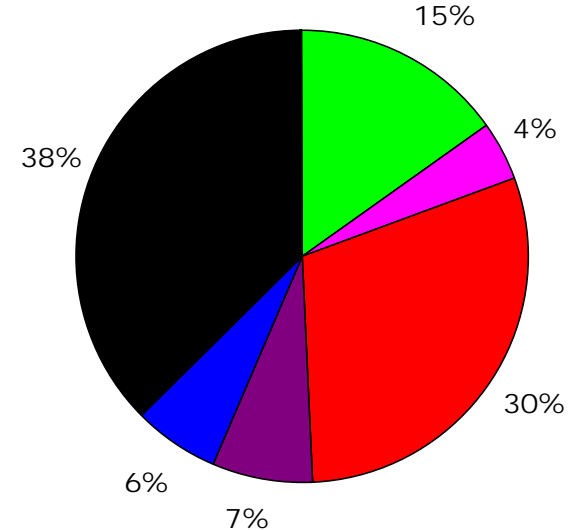


Threshold Shares and CPI-U Relative Importances: 2003

FCSUM-R Threshold



CPI-U



Summary and Conclusions



- Spending- and consumption-based thresholds
- More research
 - Equivalence scales
 - Data collection
 - Medical care
 - Consumption-based measures
 - Updates to reflect whose experience?
 - “Average” urban consumer
 - Reference family
- These thresholds, unlike official, reflect current basic consumption needs – levels and patterns

Contact



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